REMARKS

This Amendment is responsive to the Office Action mailed on December 30, 2003 and the personal interview held on February 6, 2004. Applicant's undersigned attorney wishes to thank Examiners Shoap and Hamilton for the helpful interview.

In compliance with the requirement for Applicant to file a statement of the substance of the interview, it is hereby noted that the Wilson (U.S. 5,452,634), Strouse, Jr. (U.S. 5,857,396) and Roncato (U.S. 4,063,479) references were discussed. The Examiners stated a belief that transverse oscillations would be reduced in Wilson by tightening the bolts provided to hold the circular bearers 63 to the die roll 3. A similar argument was made with respect to the end plates 6, 7 and the braces 20 of Roncato. Applicant's undersigned attorney respectfully disagreed with the Examiners' contentions, and pointed out that there is no disclosure in either of these references regarding the transverse oscillations that Applicant is concerned with. It was agreed, however, that more specific language in Applicant's claims, particularly with respect to the tensioning of the cutting tool and the location of the bearings, may help in overcoming the prior art. The claims have been amended with this in mind.

Claims 36, 39-53 and 56-70 are pending in this application. Claims 36, 39-42, 44-47, 50, 53, 56-59, 61-64 and 69-70 are amended and claims 37 and 54 are cancelled herein.

Claims 36-37, 52-54 and 69-70 stand rejected under 35 U.S.C. §103(a) as being obvious over Kesten U.S. Patent 4,455,903 in view of Strouse, Jr. U.S. Patent 5,857,396. Claims 39-48 and 56-65 have been rejected as being obvious over Kesten and Strouse, Jr. in further view of Wilson U.S. Patent 5,452,634. Claims 49-51 and 66-68 stand rejected as being obvious over Kesten, Strouse, Jr., and Wilson in further view of Mayer et al. U.S. Patent 5,074,180. Applicant respectfully traverses these rejections in view of the foregoing amendments and the comments which follow.

Applicant's independent claims 36, 53, 69 and 70 have each been amended to specify that the cutting tool (claims 36 and 53) or the embossing tool (claims 69 and 70) is acted on by a pressure force applied essentially parallel to the axis of rotation, the pressure force providing

tension to reduce a maximum oscillation amplitude of the tool transverse to the axis of rotation during a cutting (or embossing) procedure. The term "tension" is defined in the dictionary as "a force tending to stretch or elongate something." (The American Heritage® Dictionary of the English Language, Third Edition © 1996 Houghton Mifflin Company). Thus, in Applicant's claimed structure, a stretching (i.e., tensile) force is provided along the cutting or embossing tool, such that transverse oscillations are reduced as the tool is used. This is similar to what happens when a piano string is stretched to increase the frequency of vibration, thereby reducing the oscillation amplitude. Such structure is neither disclosed nor suggested by the prior art. In both Wilson and Roncato, the end cap bolts provide a force that brings the end caps toward each other, thereby fastening the end caps to the rotating tool. This is the opposite of the tensile (i.e., stretching apart) force provided by Applicant's claimed structure.

The other prior art cited by the examiner also fails to disclose or suggest Applicant's claimed structure. In particular, the Strouse, Jr. reference, which the Examiner cited to show a cutting tool that is biased essentially parallel to its axis of rotation, teaches the use of a lock nut assembly 55 for achieving the required amount of axial and radial play in *bearings* 42 and 43. See Figure 5 and the accompanying text in column 4, lines 28-30 of Strouse, Jr. See also the Strouse, Jr. abstract, which confirms that the intent of the invention is to provide "an axial load across all of these *bearings* to eliminate play and so to accurately position the arbors so that cutting accuracy can be maintained" (emphasis added). Moreover, column 2, lines 15-27 confirm that the intent of Strouse, Jr. is to control "excess play in *bearings*" (emphasis added) and that a "preload" is applied to the angular contact *bearings* to eliminate or control the axial and radial play.

Thus, it is clear that Strouse, Jr. is only concerned with eliminating or controlling play in bearings. This is quite different from Applicant's intent, which is to reduce the oscillation amplitude of a cutting (or embossing) tool transverse to the tool's axis of rotation during a cutting (or embossing) procedure. Whereas Strouse, Jr. is concerned with play found in bearings, Applicant is concerned with oscillations present in a rotating cutting or embossing tool, transverse to the tool axis of rotation.

The Examiner recognized this distinction on page 5 of the Office Action, in the discussion responding to Applicant's previous arguments. Specifically, the Examiner noted that while he believes oscillation can occur in a direction parallel to a cutting tool axis, the instant application intends to deal with oscillations in the direction perpendicular to the axis of the cutting tool. In order to clarify this distinction, each of Applicant's independent claims has been amended to indicate that the biasing force increases the rigidity of the tool to reduce a maximum oscillation amplitude of the tool *transverse* to the axis of rotation during a cutting (or embossing) procedure. This aspect of the invention is disclosed throughout the specification, e.g., on page 2, second and third paragraphs and the paragraph spanning pages 17 and 18. Since the prior art taken alone or in combination fails to disclose or suggest the structure claimed by Applicant, all of the independent claims, as well as the claims dependent thereon, are believed to be in immediate condition for allowance.

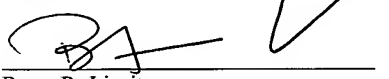
The independent claims have also been amended, as suggested by the Examiners during the February 6, 2004 interview, to clarify that the cutting tool rotates via bearings independent of the end face of the outer sleeve. This structure clearly distinguishes over the Wilson and Roncato references, which incorporate the bearings into the ends of the rotating tools.

Additional amendments have been made to the claims to correct various dependencies, thereby providing proper antecedent basis, and to clarify the claim language. For example, the term "inner section" used in various claims has been changed to "core", which is the term used on page 14, line 9 and is believed to be more precise. Other minor grammatical and/or idiomatic corrections have also been made.

Further remarks regarding the asserted relationship between Applicant's claims and the prior art are not deemed necessary, in view of the amended claims and the above discussion. Applicant's silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

In view of the above, the Examiner is respectfully requested to reconsider this application, enter the present amendment, and allow each of the presently pending claims. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicant's undersigned attorney.

Respectfully submitted,



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